

FIG. 1

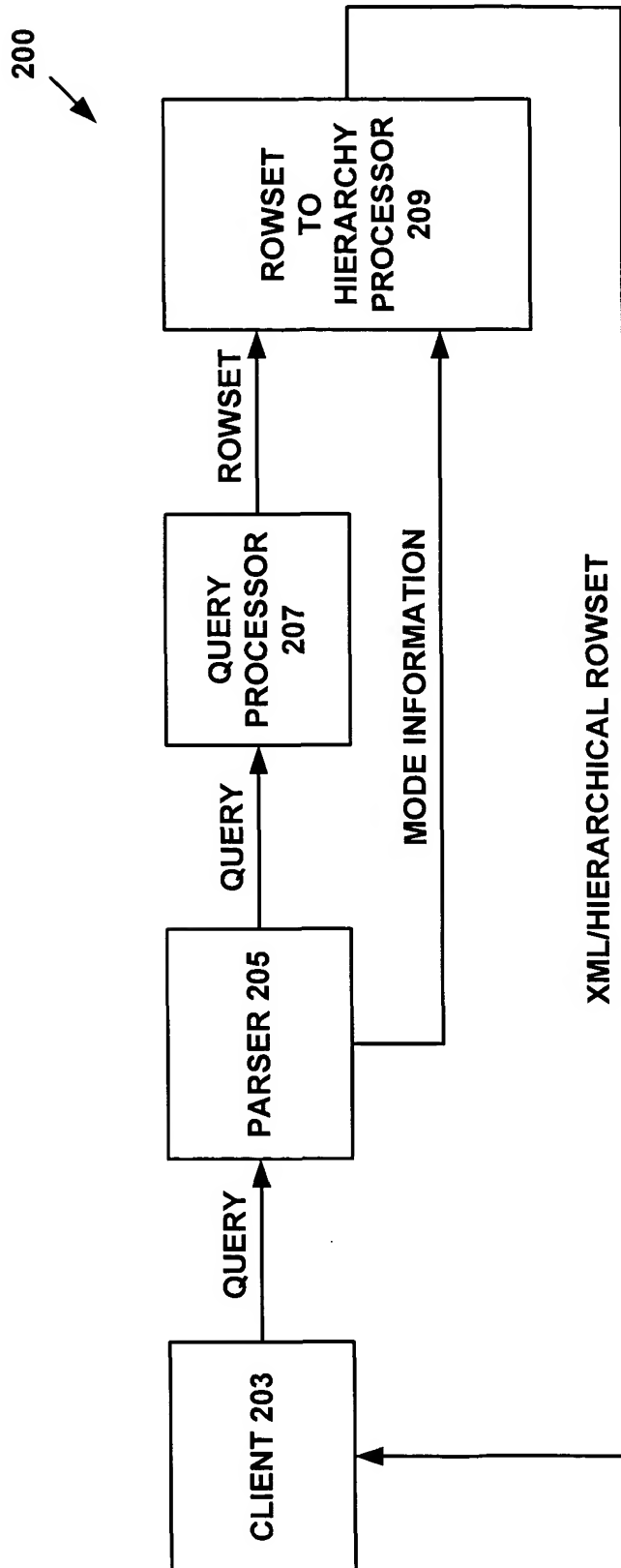


FIG. 2

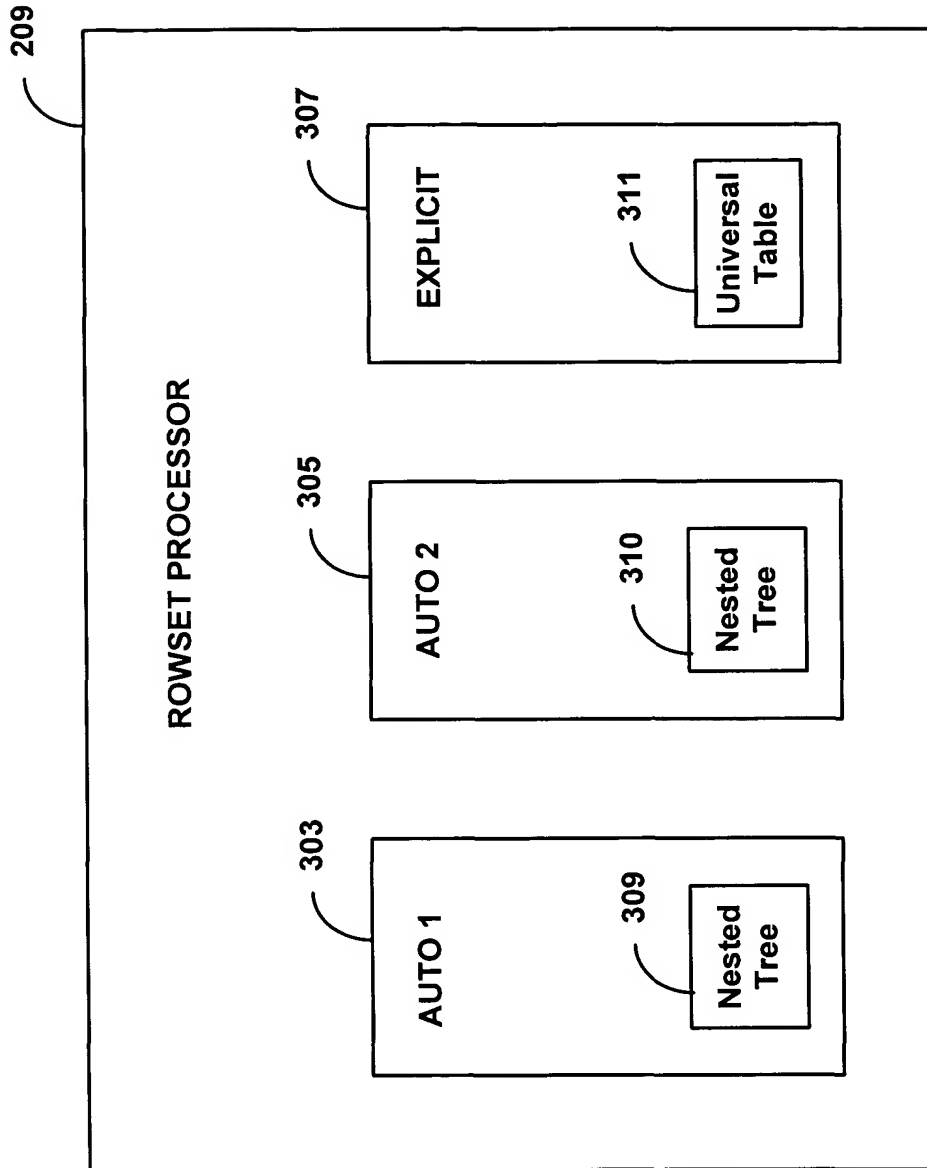


FIG. 3

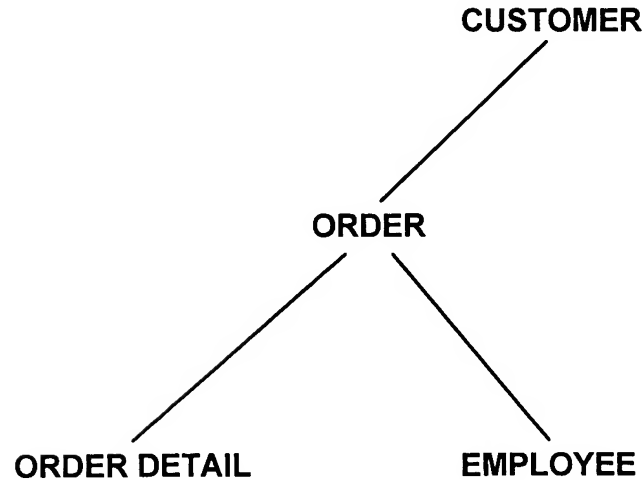


FIG. 4A

```
<Customer name="Smith">
  <Order oids="1397">
    <Orderdetail quantity="10" product="ABC" price="100"/>
    <Orderdetail quantity="5" product="DEF" price="50"/>
    <Orderdetail quantity="2" product="GHI"/>
    <Employee id="987"/>
  </Order>
</Customer>
```

FIG. 4B

311 ↗

507

TAG	PARENT	Customer!1!cid	Customer!1!name	Order!2!id	Order!2!date	OrderDetail!3!id!id	OrderDetail!3!id!idref
1	NULL	C1	"JANINE"	NULL	NULL	NULL	NULL
2	1	C1	NULL	01	1/20/1996	NULL	NULL
3	2	C1	NULL	01	NULL	OD1	P1
4	2	C1	NULL	01	NULL	OD2	P2
5	1	C1	NULL	02	3/29/1997	NULL	NULL

503 505

FIG. 5

600a
XML(SELECT A.*,
XML(SELECT B.* FROM B WHERE B.a=A.id, name="B"),
FROM A, name="A")

Results In

610a

<A>
<id>1</id>
<x>1</x>

<a>1
<y>2</y>

<a>1

Continued

<A>
<id>2</id>

<a>2
<y>1</y>

<A>
<id>3</id>
<x>2</x>

FIG. 6A

600b
XML(SELECT A.*,
XML(SELECT B.* FROM B WHERE B.a=A.id, name="B"),
FROM A,
name="A", default namespace ="http://example.com/1")

Results In

610b

<id>1</id>
<x>1</x>

<a>1
<y>2</y>

<a>1

Continued

<id>2</id>

<a>2
<y>1</y>

<id>3</id>
<x>2</x>

FIG. 6B

700a

```

SELECT A1.id,
XML(SELECT A.x,
XML(SELECT B.* FROM B
WHERE B.a=A.id, name="B"),
FROM A WHERE A.id = A1.id, name="A") as x
FROM A A1
    
```

Resulting Rowset

FIG. 7A

710a	
id	x
1	<A> <x>1</x> <a>1 <y>2</y> <a>1
2	 <A> <a>2 <y>1</y>
3	 <A> <x>2</x>
	

A 720a	
id	x
1	1
2	NULL
3	2

B 720b	
a	y
1	2
1	5
1	1
2	1

```

SELECT A1.id,
XML(SELECT A.x,
  XML(SELECT B.y as "@y" FROM B
    WHERE B.a=A.id ORDER BY B.y,
    name="B", map=path)
  FROM A WHERE A.id = A1.id, name="A") as x
FROM A A1
  
```

700b

Resulting Rowset

710b	
id	x
1	<A> <x>1</x> <B y="1"/> <B y="2"/> <B y="5"/>
2	<A> <B y="1"/>
3	<A> <x>2</x>

FIG. 7B

A 730a	
id	x
1	1
2	NULL
3	2

B 730c	
a	y
1	'a'
1	'b'
1	'c'
2	'd'

```

SELECT A1.id,
XML(SELECT
    CAST(
        XML(SELECT B.y || " " FROM B WHERE
            B.a=A1.id ORDER BY B.y, name=" ")
        AS nvarchar(4000)) as "@by",
    A.x
FROM A WHERE A.id = A1.id, map=path, name="A") as x
FROM A A1

```

700c

Resulting
Rowset

710c	
id	x
1	<A @by="a b c" > <x>1</x>
2	<A @by="d" />
3	<A> <x>2</x>

FIG. 7C